

Potential Depression and Associated Factors Among Individuals Undergoing Dialysis: A Hospital-Based Cross-Sectional Survey in Central Kerala

Sir,
Depressive symptoms, along with invasive treatment modality, can impede the psychological wellness of the individuals and substantially affect their physical and social states and subsequently, the treatment outcome.^[1] However, it is often not recognized. In this letter, we describe potential depression and the associated factors among individuals undergoing dialysis [Table 1].

We conducted a hospital-based cross-sectional survey involving 188 individuals undergoing dialysis (hemodialysis – 140 and peritoneal dialysis – 48) in four selected hospitals of Palakkad district, Kerala. We used the translated version of the nine-item depression module of the Patient Health Questionnaire–9 in Malayalam to evaluate depression.^[2,3] The institutional ethics committee approved the study protocol before the conduct of the study. We used binary logistic regression analysis to estimate the odds ratios and 95% confidence interval for the associated factors of depression, where depression was categorized as 0 = “no/mild depression” and 1 = “moderate to severe depression.”

The age of participants ranged from 22 to 82 years, of which 60% were above 50 years. The proportion of male participants was 76%, and participants who had high school or above education was 79%. The proportion of individuals undergoing hemodialysis was 74%, and the age at diagnosis was less than 50 years old for 57%. Almost 52% of the participants were undergoing dialysis for more than 2 years. Among the total participants interviewed in this study, about 50% had no or minimal depression, followed by 29.3% with mild depression [Figure 1]. The

prevalence of moderate to severe depression ($n = 38$) was 20% with a 95% confidence interval (CI) ranging from 14.7% to 26.7%.

For the binary logistic regression analysis, we included the variables sex and education, which were significantly associated with depression in the bivariate analysis ($P < 0.05$), and the potentially relevant clinical variables such as type of dialysis and age at diagnosis. Although we observed an indication that moderate to severe depression symptoms were high among those with low socioeconomic status (SES), we did not include the variables for further analysis due to lack of significance. The results showed that females had 2.42 times higher odds of moderate to severe depressive symptoms compared with males (95% CI: 1.09–5.33). Individuals with low education had 2.37 times higher odds of moderate to severe depressive symptoms (95% CI: 1.04–5.36) compared with individuals with high school or above educational attainment. We found that individuals undergoing hemodialysis had 1.67 times higher odds of having moderate to severe depression compared with participants undergoing peritoneal dialysis. Similarly, the individuals diagnosed with the disease at above 50 years of age had 1.71 times more likely chance of presenting with moderate to severe depression compared with individuals diagnosed at the age of below 50 years. However, both these results were not statistically significant.

The more extended period spent with the dialysis machines in a week and frequent visits to the hospital along with stringent diet and fluid restrictions, consumption of too many medicines at a time, dependency on caregivers,

Table 1: The factors associated with moderate to severe depression among participants undergoing dialysis

Characteristics	Total <i>n</i> =188	Moderate to Severe depression		Odds Ratio (OR) and confidence interval (CI)	
		<i>n</i>	%	Adjusted OR	95% CI
Gender					
Male	143	23	16.1	1	
Female	45	15	33.3	2.42	1.09-5.33
Education					
High school or above	148	24	16.2	1	
Seventh standard or below	40	14	35.0	2.37	1.04-5.36
Type of dialysis					
Peritoneal dialysis	48	7	14.6	1	
Hemodialysis	140	31	22.1	1.67	0.66-4.20
Age at diagnosis					
Up to 50 years	108	17	15.7	1	
Above 50 years	80	21	26.3	1.71	0.80-3.61

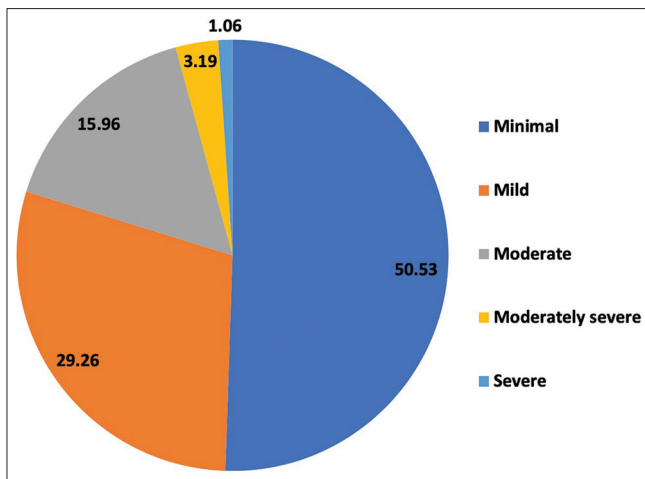


Figure 1: Symptoms of depression among participants, assessment based on the score of Patient Health Questionnaire-9 scale

economic burden, loss of freedom, and social loneliness affect the psychological well-being of individuals undergoing dialysis.^[4,5] Along with that sociodemographic factors as well as clinical factors can gradually influence individuals undergoing dialysis to develop depressive symptoms. The recent Indian studies also suggest that gender, low SES, longer duration of dialysis, undergoing hemodialysis, and comorbid conditions are significant predictors of depression among chronic kidney disease patients.^[6-8] The challenges faced by the women to fulfill their specific roles in families and the physical and economic dependency on other family members may make them more vulnerable to develop depressive symptoms. Peritoneal dialysis is more home-friendly and imposes fewer restrictions on the individuals; however, the role of caregiver is very much crucial as it needs consistent hygienic caring and supervision throughout the procedure.

Coming to the strengths and limitations of our study, we had to restrict our study to the four respective centers that offered permission to interview individuals undergoing dialysis. However, by including one government, two private, and one charitable trust, we could select patients from all types of facilities available in the district. We derived the sample size for the primary objective of estimating the prevalence of depression. This affects the study results with less power.

To conclude, observations from this study strongly suggest the need for routine assessment of depression in dialysis centers and to imply new interventions to improve the adapting skills for the individuals undergoing dialysis. Females and participants in lower education strata need more attention to make them adaptable to dialysis treatment. The holistic approach of physicians, staff nurses, social

workers, and clinical psychologists can make a change in the psychological health of individuals undergoing dialysis. The introduction of new psychotherapeutic interventions along with the long-standing treatments can address the emotional needs and improve coping skills in individuals with chronic illness.

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Conflicts of interest

There are no conflicts of interest.

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